

# Measuring the Factors Influencing the Consumers' Attitude on Selecting International Beauty Soaps: An Investigation in Bangladesh Market

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## Abstract

In the age of globalization, companies are trying to capture customers' value for its successive growth as well as its sustainability not only in national market but also in international market so that they (customers) come in return. Moreover, companies are communicating and delivering 'value proposition' to the customers. As a result, manufacturers have to focus on 'unique selling proposition' i.e. focus on one or more factors, which is the basis for strategy formulation (Kotler and Keller, 2005, p. 56), to ensure customers' benefit as well as profitable customer relationship with company. In this paper, attempt has been made to identify some common factors, which influence customers to choose beautification items, especially for beauty soap products in Bangladesh market. Moreover, Fishbein's Multiattribute Attitude Model (FMAM), has been used to measure overall attitude of each soap product in same market. Furthermore, it can be observed that customers in Bangladesh, basically give emphasize on some common factors (six) for their buying decision, such as: price, relaxation, brand reputation, all natural ingredients, smell, and good health, which are the main factors to analyze this paper. In addition, it can be seen that customers specially focus on price, which is the sought after result of this study through Principal Components Analysis (PCA).

**Keywords:** Value Proposition, Unique Selling Proposition, Multiattribute Attitude Model (MAM), Brand Reputation, Principal Components Analysis (PCA), Rotated Factors.

## Introduction

Soap history began several thousands years ago. The Romans were the first to mention it in their records. They knew how to make soap, and interestingly, were aware of recipes for both solid and soft soap, which are known to us as bar and liquid soap. The Romans not only washed faces and bodies with soap, but also used it for hair-dyeing. They learnt it from Gaels who traditionally had long hair and used oil and coloring ingredients to make their hair look beautiful. As the Gaels bathed and swam, they noticed that the substance began to foam in water. That was the discovery of earliest soap. Until the mid-nineteenth century, however, soap remained very expensive. So, even kings could not use it frequently, to say the least of the common people. Moreover, it is amusing that soap history dates back to early days of civilization, and those 150 years ago, soap could be most precious present for a birthday.

The modern soap history began almost two centuries ago, when people learnt to produce cheaper soap. Most soap was made by using the animal fat called tallow, though sometimes vegetable fat was used. Soap produced from tallow was less expensive and contained elements which allowed manufacturing more from soap less amount of fat. Soap produced from vegetable fat was softer and could be used for cleaning as well as softening the skin. As already mentioned, both bar and liquid soap was known already in the Roman times. Bar soap contains a higher amount of alkali; therefore, it is not recommended for sensitive skin, as it may damage the thin layer. Liquid soap was reinvented at the end of the twentieth century ([www.history of beauty soap](http://www.historyofbeautysoap.com).2009).

Nowadays, soap has become part of our everyday lives. Thousands of soap products are known, which help us not only stay clean, but also look appealing, cheerful and successful. It has mentioned that 50% of market share were occupied by the domestic soaps in Bangladesh market. Moreover, it can be seen that the manufacturers of beauty soap in Bangladesh earned Tk.600 crore in 2005 and this rate of earning is increasing tremendously in recent years (Islam, 2005, p.5). For the betterment of customers as well as maintaining this growth, manufacturers are trying to add more suitable ingredients, such as: vitamins, smoothing elements, aroma oils of tea tree, citrus, bergamot, mint, sage, rose, geranium, coconut oil, palm oil and shower gels etc. These will help to clean skin especially tender and is rich in nutrients. Besides the local soap there are a number of foreign soaps are marketed in Bangladesh. Today, it is not uncommon to find nicely wrapped soap in gift shops. The history thus repeats itself, often making soap a dear present for a birthday.

## Rationale of the study

In the global market, competition in beautification item is increasing day by day. In Bangladesh, the customers are looking for quality beautification item, especially soap products, to protect them from skin related diseases or

for using it as a healthcare tool. In recent years, the rate of using these products is phenomenal. The findings of this study help importer to concentrate more to their products for its successful survival to the country market, by which customers can get their required products. As a result, importer, manufacturers and customers will be benefited from this study. At this point, this study can show the rays of hope to the beautification items (e.g. beauty soap) in order to redesign the strategy framework for this sector. Moreover, this paper would be helpful to the policy makers and manufacturers, who are directly or indirectly, involved in this industry.

### Objective of the study

The main objectives of this study are as follows:

- (i) to know the common factors as well as the most contributing factors, which influence to choose soap product(s) through factor analysis;
- (ii) to find out overall attitude of each soap product in Bangladesh market; and
- (iii) to recommend some guidelines to the policy makers to add more features for enhancing product quality.

### Research Methods

There are two types of soap in Bangladesh Market, viz. (i) local and (ii) foreign. In this study only foreign soap has been used. The empirical study of this paper specially focuses on quantitative research. To conduct this study, primary data were collected from respondents an on spot interview through structured questionnaire (Malhotra, 2004, p. 172).

To identify common factors as well as the most contributing factors to choose a particular soap in Bangladesh market, a scale was formed similar to Fishbein's Multiattribute Attitude Model (FMAM). It consists of ten points, where the number 1 indicates 'extremely unlikely' and the number 10 indicates 'extremely likely', which were used to measure strength belief (bi) of a targeted product (e.g. beauty soap). Moreover, the number '+3' depicts 'very good', whereas '-3' illustrates 'very bad', which were used to measure for evaluation of attribute, i.e. salient belief (ei) of all ingredients of that targeted soap products (Peter, 1993, p. 188). Though there were different forms of soaps such as: liquid soap, beauty soap/bathe soap and washing soap etc. in the country market. The authors, in this paper, have taken only beauty soap as a research phenomenon. In this case, a sample of 241 customers, who were used at least six foreign soaps during last fifteen weeks, were interviewed. Furthermore, the weight of each soap was 85-95 gm and the population was from six divisions in Bangladesh.

As a technique, simple random sampling (Zikmund, 2005, p. 384) was applied for collecting data. Moreover, a structured questionnaire was used in tapping the information from 241 respondents, which was designed in the light of the objectives of the study according to the Patter of Fishbein's Multiattribute Attitude Model (FMAM).

Moreover, Factor Analysis: Principal Component Analysis (PCA), has been used to find out some common factors as well as the most contributing factors to choose a soap product in Bangladesh market. Furthermore, Kaiser-Meyer-Olkin (KMO) and Bartlett's test has been taken for measuring of sampling accuracy. If the value of this test is 0, the factors are partially correlated. In addition, a value to 1 indicates the factor is largely correlated.

This paper is divided into four sections: the first section covers the introduction and rationale of the study. The second section depicts the strong literature review, which focuses on Fishbein's Multiattribute Attitude Model (FMAM) as well as Factor Analysis (FA). The third section focuses on significant level of the test, sample accuracy and total variables explained of beautification item (e.g. beauty soap) in Bangladesh market. Finally, the last, not the least one presents appendix to make this paper more attractive to the readers.

### Literature Review

According to Peter (1993, p. 188), there are called Multiattribute Attitude Model because it focus on consumers' belief about multiple product or brand attitude. Martin Fishbein's has designed this model. Now, formally, the model proposes that:

$$A_0 = \sum_{i=1}^n b_i \cdot e_i$$

Where,

$A_0$ = Attitude toward the object,

$b_i$ = The strength of the belief that the object has attribute i,

$e_i$ = the evaluation of attribute i,

$n$ = The number of salient beliefs about the object.

Moreover, this model can identify overall attitude or, evaluation of each product. Hence, it can be possible to measure overall attitude of each beautification item (soap) by using this model. He also mentioned

that belief strength ( $b_i$ ) is the perceived probability of association between an object and its relevant attributes. For measuring belief strength ( $b_i$ ), he has been used 10 points scale, which is: Extremely Unlikely 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 Extremely Likely. Moreover, belief evaluation i.e. salient belief ( $e_i$ ), that reflects how favorably the consumer perceives that attribute. Furthermore, for measuring a belief evaluation i.e. salient belief ( $e_i$ ), he has been used 7 points scale, which is: Very bad -3 -2 -1 0 +1 +2 +3 Very good.

According to Richard (1977. p. 137), marketers have been using Multiattribute Attribute Model to explore consumer behavior since the late 1960.

According to Schiffman (2004, p. 14), 'value proposition' is a term rapidly replacing the popular business phrase 'Unique Selling Proposition' is the core of successful positioning. The soap manufacturers in our country are arranging their products' value proposition differently to make customers in loyal, which is the finding of this paper. A study finding shows that a 5% increase in loyalty can nearly double the lifetime profit (Aaker, 2002, p. 56). Hence, the manufacturers as well as increase loyal customers for survival their own company. The sustainable survival lies on capturing customers' value in service organizations as well as manufacturing firms (Mollah and Amin, 2008, p. 32).

According to Garvin (1998, chapter, 3), the quality as "affordable excellence", and is "operations driven". According to Gummesson (1994, p. 77), service quality must be viewed in conjunction with service productivity and profitability. He also mentioned that quality and productivity are twin paths to creating value for both customers and companies.

## Findings of the study and its interpretation

**Table1: KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		Dove	Camy	Lux	Imperial Leather	Fa	Nevia	Palmolive
		0.711	0.773	0.695	0.720	0.801	0.701	0.775
Bartlett's Test of Sphericity	Approx. Chi-Square	58.795	88.187	81.290	49.994	104.024	100.885	134.631
	df	15	15	15	15	15	15	15
	Sig.	.000	.000	.000	.000	.000	.000	.001

The KMO (Kaiser-Meyer-Olkin) statistic varies between 0 and 1. A value of 0 indicates the sum of partial correlations, where the factor analysis is likely to be inappropriate. Now, a value close to 1 indicates largely correlated (i.e. superb), where the factor analysis is distinct and more appropriate. Moreover, Bartlett's test is highly significant ( $P < 0.001$ ) and therefore factor analysis is appropriate (www. factor analysis, 2009). Hence, from the table: 1, on above, represents that the approximate chi-square statistics are 58.795, 88.187, 81.290, 49.994, 104.024, 100.885 and 134.631 with 15 degrees of freedom, which is significant at the 0.05 level for Dove Soap, Camy Soap, Lux Soap, Imperial Leather Soap, Fa Soap, Nevia Soap and Palmolive Soap respectively. Moreover, it was found that the result of the Kaiser-Meyer-Olkin test shows that the sample adequacy for Dove Soap (0.711) is good, whereas one (1) is superb. Similarly, sample adequacy for Camy Soap ( $0.773 < 1$ ), Lux Soap ( $0.695 < 1$ ), Imperial Leather Soap ( $0.720 < 1$ ), Fa Soap ( $0.801 < 1$ ), Nevia Soap ( $0.701 < 1$ ) and Palmolive Soap ( $0.775 < 1$ ) are good. This test provides a minimum standard for the Factor Analysis (FA), or a Principle Components Analysis (PCA), which has been shown below in table: 2. Moreover, Bartlett's test is highly significant ( $p < 0.000$ ), and therefore factor analysis may be considered an appropriate technique for analyzing the correlation matrix.

**Table 2: Communalities**

Considerable all components of a beauty soap	All Products' Initial	Extraction of Dove	Extraction of Camy	Extraction of Lux	Extraction of Imperial Leather	Extraction of Fa	Extraction of Nevia	Extraction of Palmolive
Price	1.000	.336	.857	.910	.421	.167	.924	.962
Relaxation	1.000	.658	.701	.643	.714	.656	.710	.806
Brand Reputation	1.000	.509	.573	.673	.605	.694	.787	.768
All Natural Ingredients	1.000	.777	.719	.426	.696	.680	.684	.732
Smell	1.000	.770	.774	.749	.630	.678	.517	.693
Good Health	1.000	.712	.675	.718	.686	.655	.687	.785

Extraction Method: Principal Component Analysis (PCA).

**Table 3: Total Variables Explained of Beautification item (e.g. beauty soap) in Bangladesh Market, which have shown below:**

Name of all beauty soap Products	Extracted component(s) of all beautification item	Total Eigenvalues	Initial Eigenvalues, or Extraction sums of squared loadings	Initial Eigenvalues, or Extraction sums of squared loadings
			% of variance	Cumulative %
Dove	1	2.724	45.407	45.407
Camy	1	3.269	54.483	54.483
Lux	1	3.080	51.330	51.330
Imperial Leather	1	2.615	43.581	43.581
Fa	1	3.528	58.800	58.800
Nevia	1	3.257	54.290	54.290
Palmolive	1	3.740	62.330	62.330

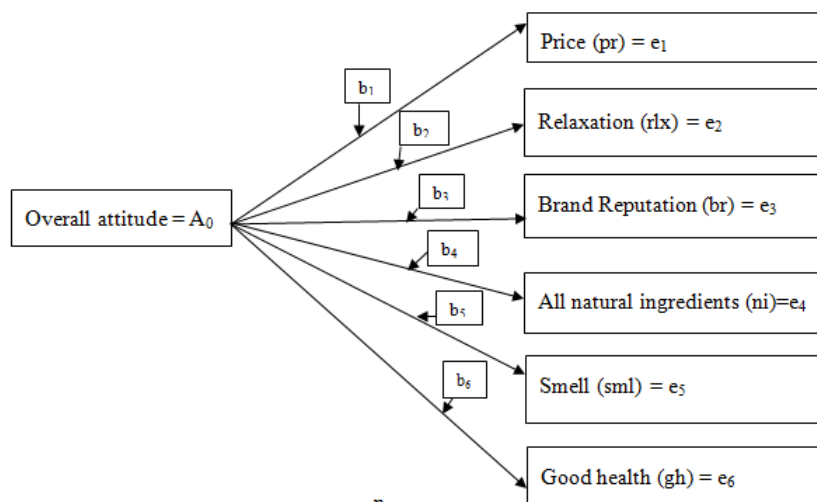
(Here, in column two, 1= Price)

Table: 3, on above, is representing the eigenvalues associated with each linear component (factors) before extraction and after extraction. Before extraction, in this research, it has identified six linear components (such as: price, relaxation, brand reputation, all natural ingredients, smell and good health) within the data set, which has been shown in figure: B, with different graphs. Moreover, the eigenvalues has shown in terms of percentage of variance explained. So, factor 1 (i.e. price) explains 45.407% of total variance for Dove Soap, which has been shown in table: 3. Similarly, factors 1 (i.e. price) of each soap product explains 54.483% for Camy; 51.330% for Lux Soap; 43.581% for Imperial Leather Soap; 58.800% for Fa, 54.290% for Nevia Soap and 62.330% for Palmolive. These results explained that the first factor (i.e. price) of each product has relatively large amounts of variance, whereas subsequent factors explain only small amounts of variance. Hence, in this study, according to the Extraction Method: Principal Component Analysis (PCA), the results suggested that the policy makers should keep close eyes on that factor (i.e. price) for the successive growth to their respective soap product(s) in Bangladesh market.

From figure: A (in appendix), the scree plots explained that the curve begins to tail off after one factor (from figure: 1 to figure: 7) for Dove Soap, Camy Soap, Lux Soap, Imperial Leather Soap, Fa Soap, Nevia Soap and Palmolive Soap, respectively. Finally, it can be concluded that the probable justify would be only a factor (i.e. Price).

From figure: B (in appendix), it can be said that the factor structure matrix represents the correlations between the variables or the factors. The factors pattern matrix represents the linear combination of the variables. Figure: B (in different graphs form graph: 1 to graph: 7) has indicated that the factors are highly correlated. Moreover, the factor plots in figure: B has shown that the variables such as: price, relaxation, brand reputation, all natural ingredients, smell, and good health in the rotated factor space. These graphs have indicated that how the variables are organized in the common factor space. Furthermore, from figure: B, in graph :1, it can be observed that all natural ingredients, good health, and relaxation are more rotated factors than those of other factors for Dove Soap, which is the sought after result of component plot in rotated space and customers actually give value of those factors when they purchase Dove Soap. Similarly, from graph: 2, it is obvious that smell, relaxation and good health are more rotated factors than those of other factors for Camy Soap. Likewise, from graph: 3, depicts that smell, price and good health are more rotated factors than those of other factors for Lux Soap. Moreover, from graph: 4, represents that relaxation, good health and smell are more rotated factors than those of other factors for Imperial Leather Soap. In addition, from graph: 5, illustrates that brand reputation, all natural ingredients and smell are very much close to other factors for Fa Soap. Again, form graph: 6, shows that smell, brand reputation and price are more rotated factors than those of other factors for Nevia Soap. Finally, graph: 7, indicates that good health and relaxation are more rotated factors than those of other factors for Palmolive Soap. Hence, the findings, on above, were taken on the basis of data information through Extraction Method: Principle Component Analysis (PCA).

Now, it can be measured the overall attitude of each soap product in Bangladesh market through Fishbein's Multiattribute Attitude Model (FMAM) as follows:



$$\begin{aligned}
 \text{Hence, overall attitude of Lux Soap, } A_0 &= \sum_{i=1}^n b_i \cdot e_i \\
 &= pr + rlx + br + ni + sml + gh \\
 &= 1990 + 2413 + 2750 + 1534 + 1887 + 1667 \\
 &= 12,241
 \end{aligned}$$

Similarly, overall attitude of Dove, Camy, Imperial Leather, Fa, Nevvia and Palmolive are 11,132; 7,120; 9,234; 5,156; 8,979; and, 4,780 respectively. From the above results, it can be concluded that the overall attitude of Lux Soap is the highest from the customers' point of view in Bangladesh market, whereas Dove is in second position in that regard. Likewise, Imperial Leather, Nevvia, Camy, Fa and Palmolive were in 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> position respectively.

### Recommendations

The common factors as well as the most correlated factors have been shown in figure: B (in appendix). For the betterment of customers and manufacturers, it has been recommended for the following prescriptions for each international beauty soap in Bangladesh market are as follows:

- (i) For Dove Soap: from graph: 1, component plot in rotated space clearly represents that three factors such as: all natural ingredients, good health and relaxation, which are highly correlated. Hence, the manufacturer should focus on those factors for Dove Soap.
- (ii) For Camy: from graph: 2, it can be observed that smell, relaxation and good health are the most influential factors to choose Camy in Bangladesh market. So manufacturer has to consider it accordingly.
- (iii) For Lux Soap: from graph: 3, it can be seen that smell, price and good health are more important contributing factors to choose this soap. Hence, manufacturer should keep close eyes on that objects.
- (iv) For Imperial Leather: from graph: 4, it represents that relaxation, good health and smell are very close to choose Imperial Leather. Hence, manufacturer should consider it as the priority basis.
- (v) For Fa: from graph: 5, it can be shown that brand reputation, all natural ingredients and smell are the most influential factors for making decision by the customers. Therefore, manufacturer should consider it accordingly.
- (vi) For Nevvia: from graph: 6, it is clearly stated that smell, brand reputation and price are highly correlated and customers consider these factors hardly when they purchase Nevvia. Hence, manufacturer should keep close eyes on those factors.
- (vii) For Palmolive: from graph: 7, it is clearly seen that good health and relaxation are highly correlated and customers consider these factors when they purchase Palmolive. Therefore, manufacturer should keep close eyes on these factors.

### Conclusion

International competitors are increasing day by day in Bangladesh market with their quality products. To capture customers' value, companies are offering 'value proposition' to its target customers, with its target products specially soap products in Bangladesh market. Different companies in Bangladesh are making 'value proposition' on their ability to serve customers. In this paper, it can be observed that international soap companies have been concentrated on six common factors such as: price, brand reputation, relaxation, all natural ingredients, smell and good health, to attract customers especially for Bangladesh market. Among these factors,



every company has arranged ‘value proposition’ according to their own marketing plan and strategy. So, it is suggested that the previous prescriptions should be followed strictly by the international soap manufacturers in Bangladesh for capturing customers’ value as well as its survival and successful growth in Bangladesh market and in world market.

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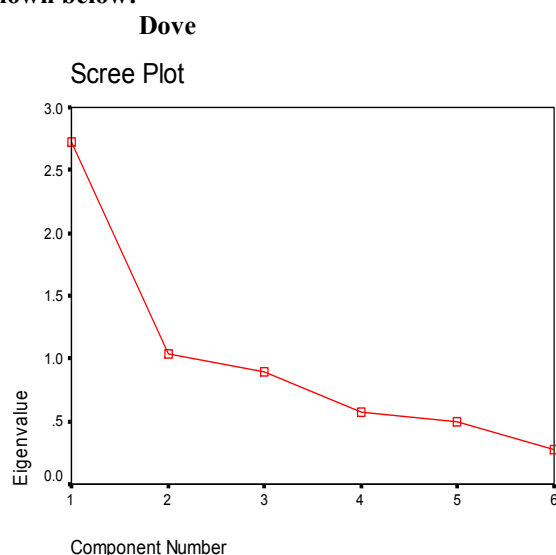
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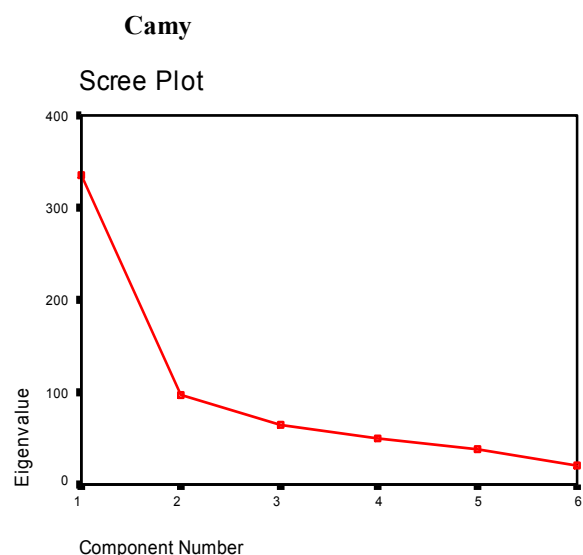
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## Appendix

**Figure A: the Scree Plots of all targeted international soap products in Bangladesh market, which have shown below:**

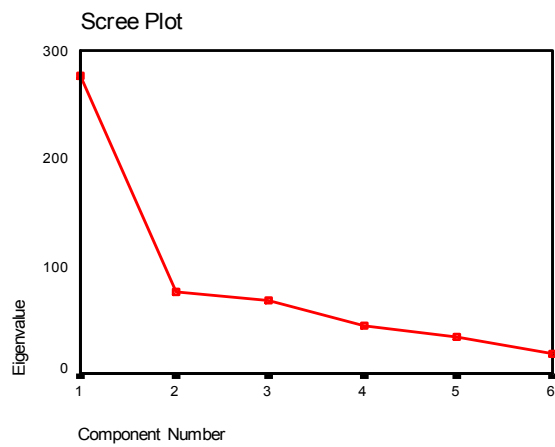


**(Fig: 1)**



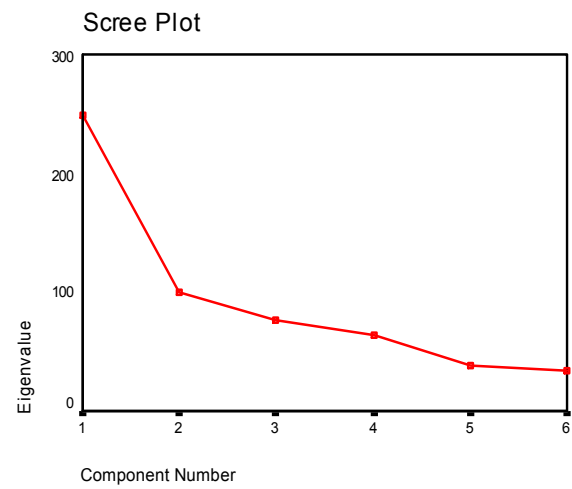
**(Fig: 2)**

### Lux



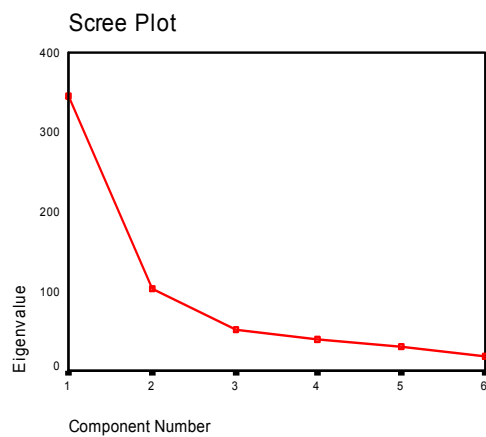
(Fig: 3)

### Imperial Leather



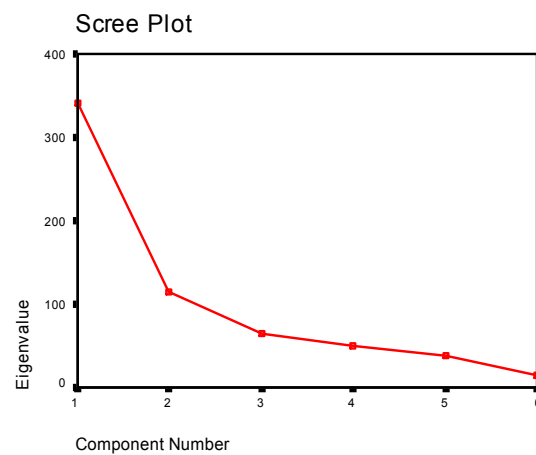
(Fig: 4)

### Fa



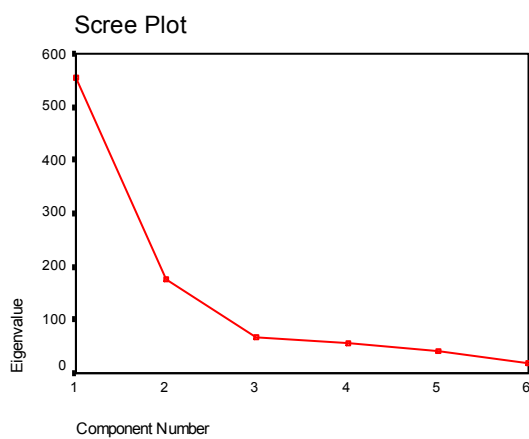
(Fig: 5)

### Nevia



(Fig: 6)

### Palmolive

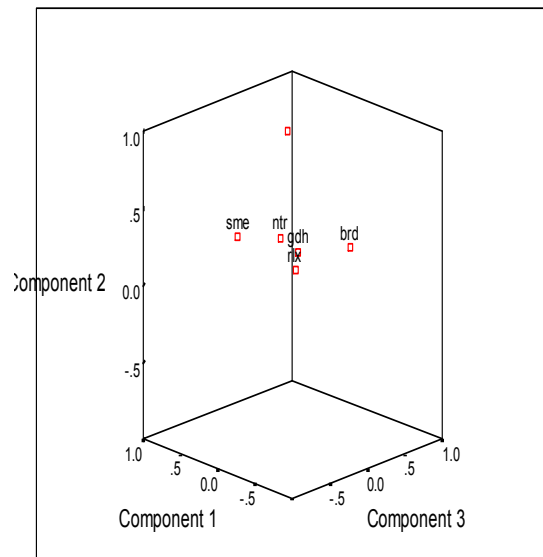


(Fig: 7)

**Figure B: The Component Plots in Rotated Space of all targeted soap products in Bangladesh market, which have shown below:**

**For Dove**

**Component Plot in Rotated Space**

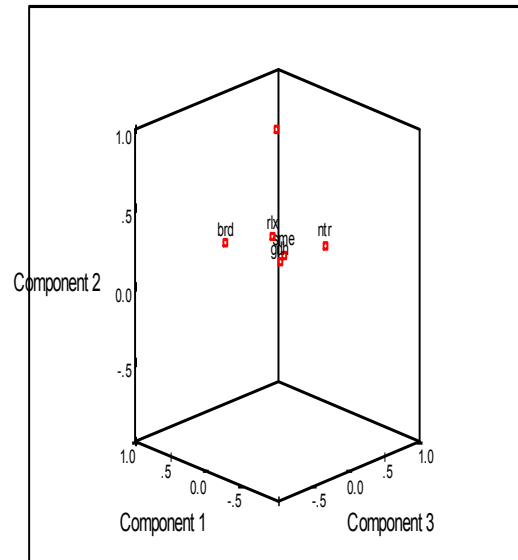


**Graph: 1**

Here, pr= price  
rlx= relaxation  
sme= smell  
brd= brand reputation  
nlr= all natural ingredients  
gdh=good health

**For Camy**

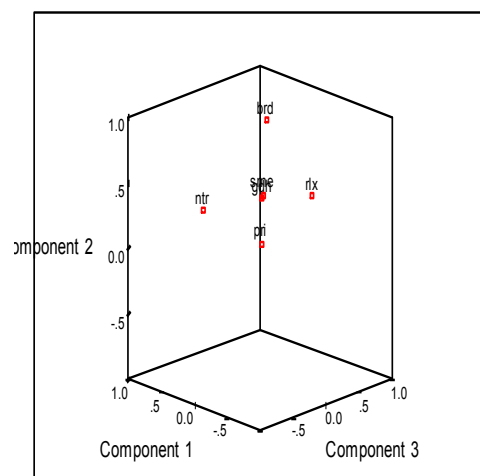
**Component Plot in Rotated Space**



**Graph: 2**

**For Lux**

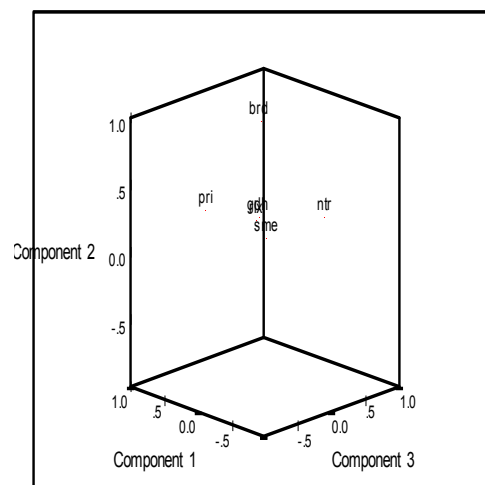
**Component Plot in Rotated Space**



**Graph: 3**

**For Imperial Leather**

**Component Plot in Rotated Space**

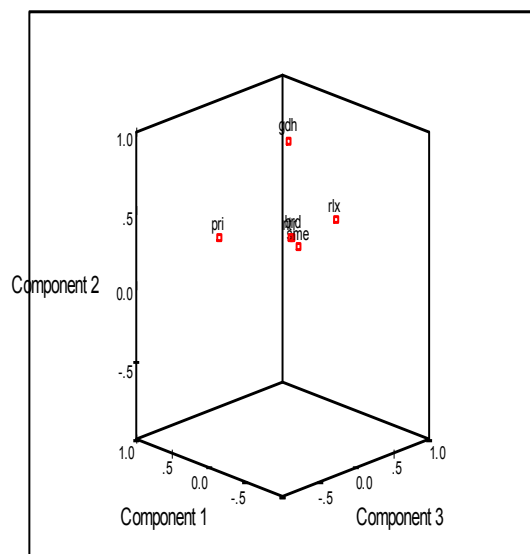


**Graph: 4**



**For Fa**

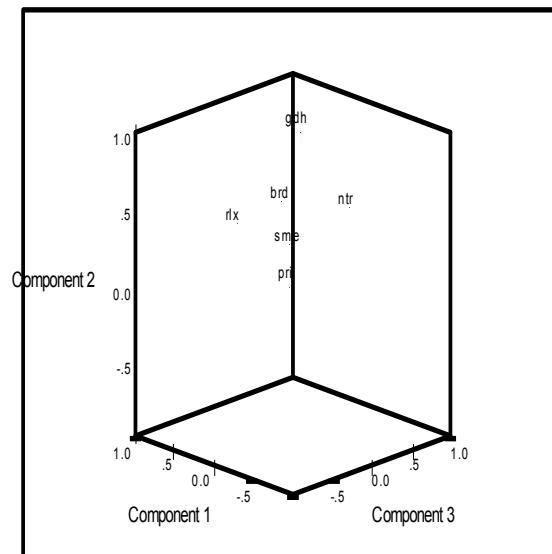
Component Plot in Rotated Space



**Graph: 5**

**For Nevia**

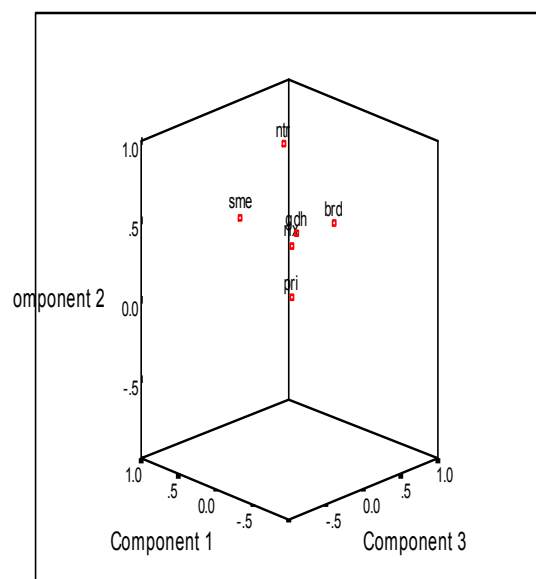
Component Plot in Rotated Space



**Graph: 6**

**For Palmolive**

Component Plot in Rotated Space



**Graph: 7**

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